

SECRET

25X1



Nº 132

CIA/RR EM 64-31

October 1964

INTELLIGENCE MEMORANDUM

ANALYSIS OF TRUCK TRAFFIC ON SELECTED ROUTES IN NORTH VIETNAM AND LAOS

DIA review(s) completed.

NGA review(s) completed.

DIRECTORATE OF INTELLIGENCE
Office of Research and Reports

25X1

SECRET

GROUP 1
Excluded from automatic
downgrading and
declassification

W A R N I N G

This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

FOREWORD

An analysis of the information received from ground observers and photographic reconnaissance on truck traffic in North Vietnam and in Communist-held portions of Laos as it relates to the logistic support intended for Communist military forces in Laos and for the Viet Cong in South Vietnam is presented in this memorandum. The study on which this memorandum is based was undertaken for the United States Intelligence Board (USIB) to provide intelligence on insurgency in Laos and South Vietnam. USIB has delayed formal consideration of the study pending receipt of comments from the field. The study was prepared with support from the Transportation Division of the Defense Intelligence Agency (DIA) and has been coordinated with DIA.

After this memorandum and its accompanying map were prepared, a new numbering system for the roads in Laos was accepted for use in the intelligence community. The old numbering system has been used in this memorandum in order to avoid reprinting the map.

S-E-C-R-E-T

CONTENTS

	<u>Page</u>
Summary and Conclusions	1
1. Introduction	3
2. Route 7	4
3. Route 12 from Ha Tinh to the Junction with Route 12A . .	5
4. Route 12 Between the Junctions with Routes 12A and 8A . .	6
5. Route 12A-12A/B-12B	7
6. Route 9	8
7. Route 8	9
8. Routes 1, 101, and 102	10
9. Routes 4, 8A, and 23	10

Appendixes

Appendix A. Statistical Tables	11
Appendix B. Limitations of the Sources of Intelligence . . .	17

Tables

1. Laos: Trucks Moving Both Ways Counted by Ground Observers on Selected Routes, January 1963 - June 1964	13	
2. Laos and North Vietnam: Trucks Observed by Photographic Reconnaissance, 	14	25X1

Map
(Inside Back Cover)

Laos: Transportation and Control

- v -

S-E-C-R-E-T

ANALYSIS OF TRUCK TRAFFIC ON SELECTED ROUTES
IN NORTH VIETNAM AND LAOS*

Summary and Conclusions

Reports of ground observers and an estimate of traffic based on the data obtained from high-level aerial photography have revealed sufficient truck traffic on roads of North Vietnam and Communist-held portions of Laos to identify the principal roads over which supplies are moved from North Vietnam to Communist forces in Laos.** Low-level aerial photography and reports of ground observers also have identified the routes used for truck traffic during the entire year and those used only during the dry season. The limitations of the sources and the fact that the contents of the majority of the trucks on all routes remain unidentified, however, make it impossible to estimate with certainty the level of supplies moved from North Vietnam to Laos.

The principal roads over which supplies are moved from North Vietnam to Communist forces in Laos are routes 7, 12, and 12A-12A/B-12B (also referred to as the 12A/B complex). Supplies also are moved to Communist forces over routes 8 and 9, but there is only minor truck traffic over routes 8A and 23, which connect with these routes. The magnitude of truck movement over route 7 and the part of route 12 in North Vietnam during the period covered by this memorandum has been considerably in excess of the estimated daily supply requirements of the Communist troops that are supplied over these routes, and average daily traffic over both routes appears to have increased in the first half of 1964 compared with the average for the full year of 1963.

In 1964, traffic observed on the 12A/B complex, which leads from route 12 into southern Laos, appeared to have been lower than that which might have been expected on the basis of the traffic observed moving over route 12. Traffic reported on this complex during the spring of 1963 by ground observers probably was of sufficient volume to represent some buildup of supplies in anticipation of the rainy season or for some other purpose, such as supporting the Viet Cong in South Vietnam. Ground observers did not cover this route during January and February 1964, but since February such observers report much less traffic on the 12A/B complex than in 1963. Moreover, an analysis of the data obtained from aerial surveillance tends to show no more truck traffic than needed to meet the current daily requirements of the troops supplied by this route. It is believed, nevertheless, that traffic on this route before the beginning of the rainy season in 1964 was higher than the level indicated by ground and aerial

* The estimates and conclusions in this memorandum represent the best judgment of this Office as of 15 August 1964.

** See the map, inside back cover.

S-E-C-R-E-T

observation. Because of the poor condition of the road, truck traffic has not moved over this route after about June of each year, but soldiers walking and porters carrying supplies have been observed during the rainy season and have confirmed the importance of this route throughout the year.

From the reports of ground observers and from aerial photography, it has been possible to confirm the principal routes and to obtain a rough measure of the number of trucks moving over them. Several problems have been encountered in the use of these sources, however, so that little reliance can be placed on the estimated magnitudes of truck traffic moving over the various routes.* Although these sources serve other purposes, they have not been of much value in measuring the volume and cycle of truck movements that could be used in producing specific estimates of enemy capabilities and intentions.

* For a detailed discussion of these problems, see Appendix B, p. 17, below.

S-E-C-R-E-T

1. Introduction

Roads leading from North Vietnam to Laos are used to supply the estimated 10,200 Communist troops deployed in the central and southern provinces of Khammouane, Savannakhet, Saravane, and Attapeu and the 15,200 Communist troops located in the northern provinces of Luang Prabang, Xieng Khouang, and Vientiane. Although little information is available regarding the actual supply requirements of these forces, it is estimated currently that the forces in the southern provinces of Laos require seven to nine truckloads of supplies daily for their present level of activity.* These requirements do not include an allowance for the relatively small amount of gasoline that is used by the supply trucks. Troops in the northern provinces probably require a proportionately larger amount, about 20 to 25 truckloads daily, because of the greater activity in that area. The capacities of the roads leading from North Vietnam to Laos greatly exceed the supply requirements. During the dry season (November through April) the roads within Laos also have capacities far in excess of present supply requirements of the Communist forces in Laos, but during the rainy season trucks are not used to move supplies to the southern provinces. The main supply route for the northern provinces is an all-season road capable of meeting current supply requirements throughout the year. There are no good connecting roads within Laos between the Communist-controlled territories of the central and southern provinces and the northern provinces served by route 7.

Estimates of truck traffic and other information in this memorandum are based principally on reports of ground observers, including road-watch teams and other friendly sources, from January 1963** through June 1964 and on data obtained from high-level aerial photography [redacted] In addition, reports of low-level photographic missions and of more recent high-level missions have been examined and incorporated whenever they provided pertinent information.

During June and July, high-level reconnaissance has encountered an increase in the amount of cloud cover in comparison with earlier months, although this handicap has not been as great as was expected. Some missions flown during the first half of July encountered clouds over only about 25 percent of the area. In general, however, the cloudy, rainy weather that is characteristic of the summer season in much of Southeast Asia will continue to reduce the amount of high-level photography that will be usable for traffic analysis through September.

* Assuming an average load per truck of 3 short tons.

** Reports of ground observers before 1963 are available but have been incorporated only in the study of route 7. Inclusion of earlier reports by ground observers would not change the conclusions given in this memorandum.

2. Route 7

The volume of traffic reported on route 7 by ground observers since January 1963 and that estimated from aerial photographs since [redacted] has been considerable. If the trucks observed had all carried supplies, the amount of supplies could have been substantially greater than the requirement of about 20 to 25 truckloads per day for the troops that depend on this route. For those days in 1963 on which the road was under observation, the average number of trucks reported moving both ways per day by ground observers varied from a low of 11 (April 1963) to a maximum of 186 (September 1963).^{*} Most of the observations took place in the section of the road between the North Vietnamese border and Ban Ban, located at the eastern edge of the Plaine des Jarres.

25X1

The road was observed less often during 1964 than during 1963, but the volume of traffic reported was greater in 1964. Reports by road-watch teams are available for about 40 percent of the days during 1963 and less than 20 percent of the days during the first half of 1964. This difference in the reporting may have distorted the result, but the average number of trucks per day going both ways on those days when observations occurred in 1964 was nearly double the number in 1963 -- a little more than 100 trucks per day in the first half of 1964 compared with 55 per day reported during the full year 1963. In the first half of 1964, ground observers were unable to describe the cargo carried in about 60 percent of the trucks observed, mainly because of canvas covering, whereas about 20 percent were reported to have carried ammunition and another 20 percent carried troops. There were several night movements of trucks reported during the first part of 1964, and the frequency of night movements apparently has increased considerably since air attacks on the supply lines began in May.

As on all the routes studied, analysis of high-level photography of route 7 [redacted] does not indicate traffic approaching the volume reported by ground observers in the same or earlier periods.

25X1

The actual number of trucks photographed on part of a route was used to obtain a projected estimate of trucks on the entire route. In this way, an average of about 25 trucks per mission was estimated to be moving on route 7 between its junction with route 1 and Ban Ban, and more than 10 trucks were estimated to be moving west of Ban Ban. If parked trucks are included in the average, the estimates rise to 40 and 55 trucks, respectively.**

Valid monthly comparisons based on photography cannot be provided, because of the variation in photographic coverage from month to month and other problems involved in projecting the data to obtain the estimate.

^{*} See Table 1, Appendix A, p. 13, below.

^{**} See Table 2, Appendix A, p. 14, below.

The estimate based on photography does show, however, that the level of traffic on route 7 was in excess of supply requirements.

Route 7 is an all-season route with substantial capacity even during the rainy season. In fact, ground observers reported that the route was used more heavily during the 1963 rainy season (May through September), even though the road apparently was interdicted during August and the first 2 weeks of September, than it was during the other months of 1963. Low-level aerial photography [] shows part of route 7 in the Plaine des Jarres area to be rutted, to contain water puddles, and to be poorly maintained. This section of the road, however, is near the western end of the route and would have no effect on traffic moving over most of the route.

3. Route 12 from Ha Tinh to the Junction with Route 12A

Route 12 from Ha Tinh, the junction with route 1 in North Vietnam, to the junction with route 12A in Laos is the beginning of the supply route for the estimated 7,600 troops located in the southern provinces and part of the 2,600 troops located in Khammouane Province. These troops require an estimated total of six to eight truckloads of supplies daily. Information on this part of the road is limited to aerial photographs, except for a very few ground observations at the southern end of the route which do not contribute to the analysis.

Photographic coverage of the route was obtained []

[] disclosed a total of about 2,300 trucks, the largest number revealed by aerial photography on any route discussed in this memorandum. All but about 550 of these trucks were found to be parked, mainly at Bai Due Thon, a military staging area in North Vietnam. This staging area was greatly expanded in the recent dry season, and aerial photography revealed that the number of trucks in the area and on the route was far in excess of the number that would be required on the route if they had been used efficiently to supply the troops in southern Laos. However, it could not be determined from photographic coverage and ground-observer reports of this and other routes where the majority of these trucks were being used or how often convoys arrived at or left Bai Due Thon.

Trucks arriving at the staging area with supplies and troops probably came from Vinh and possibly Dong Hoi. Some of the truck convoys moved farther south than Bai Due Thon on route 12 beyond its junction with route 12A, whereas others moved down the 12A/B complex to southern Laos. Other trucks at Bai Due Thon may have been used to bring supplies for road and bridge construction on route 12 and the 12 A/B complex and for work on the rail line that is being reconstructed from Vinh to Bai Due Thon. Some trucks from Bai Due Thon may have turned south in North Vietnam to routes 101 and 110.

S-E-C-R-E-T

25X1 Aerial photography shows that the actual count of trucks parked at
the Bai Due Thon staging area increased from a small number in March
and April to more than 100 in May. Most of these vehicles remained
25X1 parked on consecutive days. [redacted] however, there were only about
60 parked, and none was discovered in the area by the [redacted]

25X1

25X1 [redacted] It is probable that as the rainy season progressed,
truck traffic and road construction were reduced on the roads in Laos,
particularly on the 12A/B complex, and that road and rail construction
was curtailed in North Vietnam. The trucks seen at Bai Due Thon in
May probably had moved back to Vinh, where recent photography has re-
vealed an unusually large concentration of trucks.

4. Route 12 Between the Junctions with Routes 12A and 8A

Traffic on route 12 from its junction with 12A to its junction with
route 8A has consisted of a few trucks each way per day supplemented by
one or two large convoys of 30 to 100 trucks a month since January 1963,
according to reports of ground observers. In 1963 the volume of traffic
varied from an average of 1 truck per day during July, in the rainy
season, to 32 trucks per day during March, before the rainy season.*
The large convoys reportedly carried rice, ammunition, fuel, and troops
from North Vietnam to the military installation and supply area at Ban
Boung Bau. From this area, convoys also moved to the fortified mili-
tary base at Nhommarath and to the Pathet Lao military headquarters at
Mahaxay. The large convoys usually returned to North Vietnam the next
day. The few trucks observed moving each day appeared to be engaged
in the local distribution of supplies from the supply area at Ban Boung
Bau and the transport of small groups of troops. This traffic appears
to be what would be expected on this route and probably is just adequate
for the requirements of the troops in the southern part of Khammouane
Province.

25X1 Photographic surveillance of the route was fairly extensive, particu-
larly [redacted] but revealed very few trucks. It
missed a large convoy reported by road watchers to have made a round
trip from North Vietnam to Ban Boung Bau on 15 April and another that
25X1 moved on 4 and 5 May 1964, [redacted]

25X1

25X1 [redacted] The photography in general also failed
to reveal the local traffic reported by road-watch teams.

25X1 Recent low-level photography of the route and reports by road-
watch teams indicate that the road supports at least limited traffic
during the rainy season. During the latter part [redacted] the
surface of the road had numerous water-filled ruts and potholes, but
it is possible that a large convoy could move over it during the rainy
season. In early [redacted] a convoy of about 100 trucks reportedly
moved west to Ban Boung Bau and returned.

25X1

* See Table 1, Appendix A, p. 13, below.

S-E-C-R-E-T

5. Route 12A-12A/B-12B

This complex of roads is the only truckable route available to the Communists to supply their forces of about 7,600 men in the provinces of Laos south of Khammouane Province. Road-watch teams and other ground observers have reported occasional large convoys of up to 160 trucks moving over this route during the dry season, but very little other truck traffic has been reported, and during the rainy season only foot traffic moves over the road. Coverage of the route by ground observers since January 1963, however, has been so limited or the traffic so sporadic that it has been impossible to determine how often the large convoys move.

Although such sporadic traffic and irregular reporting make it impossible to estimate with confidence the level of total traffic, some interesting facts have been obtained from the information available. During 12 days of coverage by ground observers in the period March-May 1963, 460 trucks were observed moving south on this route, whereas during 48 days covered in the same months in 1964 only about 300 trucks were reported moving south. In 1964 the contents of nearly 40 percent of the trucks could not be identified, but another 40 percent reportedly carried troops, 15 percent ammunition, and 5 percent food. Ground observers seldom reported the times at which they noted vehicles moving, but on 3 days during 1964 convoys were reported moving during the early morning hours or after 6 p.m.

This route was under aerial observation on [redacted]

25X1

25X1 , [redacted] The largest number of trucks revealed by aerial photography on any one day during that period was 28, but aerial photography confirmed none of the large convoys reported by ground observers. [redacted] a 60-truck convoy was reported by ground observers to have moved only about 15 miles between 8 a.m. and 6:20 p.m., but fairly extensive aerial surveillance of the route that day did not disclose even one truck at the reported location of this convoy. The convoy may have been parked during the day, and heavy tree foliage along the route may have concealed it from aerial observation.

25X1 Ground observation indicates that the road becomes impassable for truck traffic soon after the rainy season begins. In 1963, truck traffic ceased in early June. Ground observation supported by aerial photography indicated that the road became impassable for trucks [redacted] During the rainy season the route continued to be used for foot traffic -- villagers carrying rice escorted by armed Pathet Lao soldiers.

Neither the total volume of supplies that moved over the 12A/B complex during the year nor the amount, if any, of those supplies destined for further shipment to the Viet Cong in South Vietnam can be determined. The truck traffic observed in 1963 before the worst

part of the rainy season, therefore, undoubtedly reflected some of the stockpiling required to supply the forces dependent on this route. The volume of traffic reported in 1964 was not sufficient, however, to meet the current requirement of about five to six truckloads a day and to stockpile for the rainy season. It is logical to assume that the actual truck traffic over the route during the dry season must have been greater than the reported truck traffic. The trucks observed at Bai Due Thon could have been, and probably were, used to stockpile supplies for the rainy season.

Although it is impossible to determine whether supplies were moved over the route in sufficient quantity to permit some excess to be infiltrated into South Vietnam, it appears that the complex may be a major route for transporting Viet Cong troops toward infiltration routes into South Vietnam. A tabulation of the data from reports by ground observers shows that, of the 300 trucks reported to have moved south on this route in 1964, about 120 trucks carried only men and that about 100 carried both men and supplies. In all, about 4,000 men were observed, about 2,000 of which were identified as Viet Cong. These figures may have been exaggerated; some of the troops identified as Viet Cong actually may have been Pathet Lao, or some of the movements could have been normal rotation of troops in southern Laos. It seems likely, however, that considerable numbers of these troops were being moved south for infiltration into South Vietnam.

6. Route 9

Coverage by ground observers of route 9 also was light and irregular, especially during 1964. There were no reports during 5 of the 18 months from January 1963 through June 1964, and reports are available for less than 6 days for each of 6 months. Reports by ground observers indicate that some of the traffic from the 12A/B complex moved over route 9 to the supply bases at Muong Phine, Ban Thay, and Tchepone, although the volume of this traffic cannot be determined. Reports from ground observers show that trucks moved along route 9 mainly in convoys, about half of which had 10 or more vehicles, and that many of these convoys moved at night.

These reports show a possible pattern for some of the traffic west of Tchepone during the period January-November 1963. This pattern consisted of some convoys moving west from a point east of Ban Thay to a point past the junction with route 12B and then returning to their starting place. Sometimes a few of the trucks dropped out along the way, probably at Muong Phine, possibly turning south on route 23, but the same number of trucks returned to the starting place. Convoys of this type were reported once or twice a month. Because of the scarcity of observer reports after November 1963, it cannot be determined whether this pattern recurred in 1964.

S-E-C-R-E-T

In May 1964 an unusually large number of trucks traveled on route 9, according to ground observers. From 13 May through 23 May, 23 trucks were reported moving west daily from an unidentified place east of Muong Phine. These trucks probably were engaged in a daily shuttle and are believed to have returned unobserved each night. It is possible that they were following the pattern mentioned above.

Coverage of the portion of route 9 east of Tchepone by ground observers was very slight; only 10 days during the past 18 months were covered by reports. An average of 20 trucks moving both ways was seen on these days.

Photographic coverage of route 9 has been relatively extensive but has revealed a much lower level of traffic than that indicated by ground observation. A possible explanation for this disparity is the probability that the trucks travel on route 9 late in the day, at night, and early in the morning. Photographic surveillance of the route occurred for the most part between 10 a.m. and noon, and never before 9 a.m. or after 3 p.m. Low-level photography has revealed a few trucks under trees and under the shelter of buildings. During the period from [redacted] high-level aerial photography recorded only 16 trucks on the portion of route 9 west of Tchepone, and no convoy of more than 3 trucks was spotted. During the same period, aerial photography of route 9 east of Tchepone revealed no convoy of more than 5 trucks and a total of only 40 trucks, indicating an average of less than 1 truck moving both ways per day.*

7. Route 8

Route 8, originating at Vinh in North Vietnam, is the third major supply route over which supplies are moved into Laos. Troops in the Lak Sao and Kam Keut areas served by this route require possibly one to two truckloads of supplies daily for the present troop strength and level of activity, but in 1963 the requirement was considerably higher, for this was then an area of major military activity in Laos. From January 1963 through April 1964, ground observers on route 8 between Kam Keut and the border of North Vietnam reported that small numbers of vehicles traveled almost daily over the road. There were some days, however, when no truck traffic moved over route 8. On only 13 days during the entire period were more than 10 trucks a day noted moving over the route. It appears that trucks often were driven from North Vietnam to Lak Sao or Kam Keut on one day and returned on the following day. The route received considerably less coverage by ground observers in 1964 than it did during 1963, with the result that a trend in the level of traffic cannot be determined.** The traffic observed moving over route 8 in Laos during 1963-64 averaged about 7 trucks both ways, or 3-1/2 trucks each way per day. If these trucks

* Including parked trucks.

** See Table 1, Appendix A, p. 13, below.

S-E-C-R-E-T

S-E-C-R-E-T

were all carrying supplies, they probably would represent enough trucks to supply the Communist troops in the area.

25X1 Extensive aerial surveillance of the route between Vinh and Lak Sao [] did not show truck traffic approaching the volume as determined from ground observation of the road between the North Vietnam border and Kam Keut.* The estimated average number of trucks per mission amounted to less than five trucks going both ways and parked. Low-level photography has added little information on route 8.

8. Routes 1, 101, and 102

Route 1 south of Vinh is used to move trucks that are destined for Laos via route 12 and to supply North Vietnamese troops, estimated to be in excess of 10,000 men, located south of Vinh. In addition, this route serves the reconstruction of the rail line south of Vinh and construction at Dong Hoi and the port of Quang Khe. Photographic coverage of route 1 has been relatively good and has revealed a large number of trucks. A large number of these trucks were observed between Vinh and Ha Tinh, although the route between Ha Tinh and Dong Hoi also was heavily traveled. Only a few trucks were found on route 1 south of Dong Hoi. A comparatively large number of trucks, however, were observed on route 101 south of Dong Hoi, indicating that route 101 serves as an alternate to route 1 and, perhaps, is used to supply construction activity and troops in the area of the Demilitarized Zone. Only a few trucks were found on route 102 near Ben Quang. This route, which deteriorates into a number of trails near the North Vietnamese - Laotian border, probably is used to supply infiltration trails leading to Laos and to South Vietnam.

9. Routes 4, 8A, and 23

Routes 4, 8A, and 23 for the most part are seasonal roads, or partly so, and do not carry the amount of traffic observed on the main supply routes. Route 4 from the junction with route 7 to Ban Ta Viang is an all-season road, but from this village to Pak Sane the route becomes a seasonal road. Although considerable military activity has been reported along or near this route by ground observers and aerial photography, truck traffic reported on the route has been insignificant compared with that on route 7. Route 8A is a seasonal road and is used primarily as a connecting link between routes 8 and 12. All sources have reported very little traffic moving over it. Route 23 is a seasonal road, and only the northern part of the road, from route 9 to about 16° North latitude, is controlled by Communist forces. Almost no traffic has been reported moving over this road.

* Kam Keut is about 20 road miles west of Lak Sao.

S-E-C-R-E-T

S-E-C-R-E-T

APPENDIX A

STATISTICAL TABLES

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Laos: Trucks Moving Both Ways Counted by Ground Observers
on Selected Routes

25X1

Year and Month	Route 7		Route 12 (from 12A to 8A)		Route 12A-12B/B-12B (the 12A/B Complex)		Route 9		Route 8	
	Daily Average Number of Trucks <u>a/</u>	Days Covered by Reports	Daily Average Number of Trucks <u>a/</u>	Days Covered by Reports	Daily Average Number of Trucks <u>a/</u>	Days Covered by Reports	Daily Average Number of Trucks <u>a/</u>	Days Covered by Reports	Daily Average Number of Trucks <u>a/</u>	Days Covered by Reports
1963										
January	37	27	13	11	17	6	7	6	33	4
February	42	8	15	6	42	8	4	2	1	14
March	72	13	32	7	39	5	61	3	1	27
April	11	21	23	8	32	5	25	2	Negl.	28
May	36	19	10	15	81	2	6	8	2	18
June	59	15	13	22	1	10	25	7	85	4
July	69	14	1	17	b/	0	b/	0	b/	0
August	b/	0	2	19	b/	0	7	8	8	5
September	186	12	31	5	0	5	7	16	c/	c/
October	48	14	6	4	0	6	13	5	60	2
November	45	4	3	23	0	14	4	12	5	2
December	48	4	b/	0	b/	0	b/	0	b/	0
1964										
January	b/	0	b/	0	b/	0	b/	0	21	2
February	50	1	b/	0	b/	0	b/	0	b/	0
March	91	13	3	10	55	5	10	3	4	2
April	166	9	9	16	6	15	1	1	7	2
May	b/	0	7	22	6	28	56	11	b/	0
June	38	4	3	13	0	17	b/	0	b/	0

a. Daily average obtained by dividing the total trucks observed during the month by the number of days on which the road was observed during the same month.

b. No reports for the month.

c. No report of traffic. A bridge on the route was reported damaged.

S-E-C-R-E-T

S-E-C-R-E-T

Table 2

Laos and North Vietnam: Trucks Observed by Photographic Reconnaissance a/
25X1

Route Number	Terminal Points	Length (Miles)	Number of Days on Which Photographic Coverage Was Obtained	Total Number of Trucks Revealed by Photography b/		Projected Average Number of Trucks on Entire Route per Photographic Mission c/	
				Moving	Moving and Parked d/	Moving	Moving and Parked
7	Junction with route 1 at Phu Trung to Ban Ban	172	40	434	701	24	38
	Ban Ban to Plaine des Jarres	34	17	126	552	12	55
8	Vinh to Lak Sao	72	58	153	200	3	4
8A	Junction with route 8 at Lak Sao to junction with route 12	52	41	13	25	Negl.	1
12	Junction with route 1 at Ha Tinh to junction with route 12A about 12 miles west of the Laos - North Vietnam border	78	50	549	2,290	13	53
	Junction with route 12A to junction with route 8A	45	42	28	34	1	1
12A-12A/B-12B (the 12A/B Complex)	Junction with route 12 about 12 miles west of the Laos - North Vietnam border to junction with route 9 west of Muong Phine	103	51	133	146	6	7
9	Laos - South Vietnam border to Muong Phine	47	63	45	56	Negl.	Negl.

S-E-C-R-E-T

S-E-C-R-E-T

Table 2
(Continued)

Route Number	Terminal Points	Length (Miles)	Number of Days on Which Photographic Coverage Was Obtained	Total Number of Trucks Revealed by Photography ^{b/}		Projected Average Number of Trucks on Entire Route per Photographic Mission ^{c/}	
				Moving	Moving and Parked ^{d/}	Moving	Moving and Parked
23	Junction with route 9 at Muong Phine to Saravane	111	65	2	2	Negl.	Negl.
1	Vinh to Dong Hoi	117	61	885	1,234	10	14
	Dong Hoi to Demarcation Line	45	33	33	54	1	2

a. Based on traffic analysis survey reports through 7 July 1964.

b. The data include vehicles reported as trailers and unidentified, probable, or possible vehicles but exclude automobiles, buses, tanks, and construction equipment. The data probably include some duplication because of more than one mission flown on 1 day.

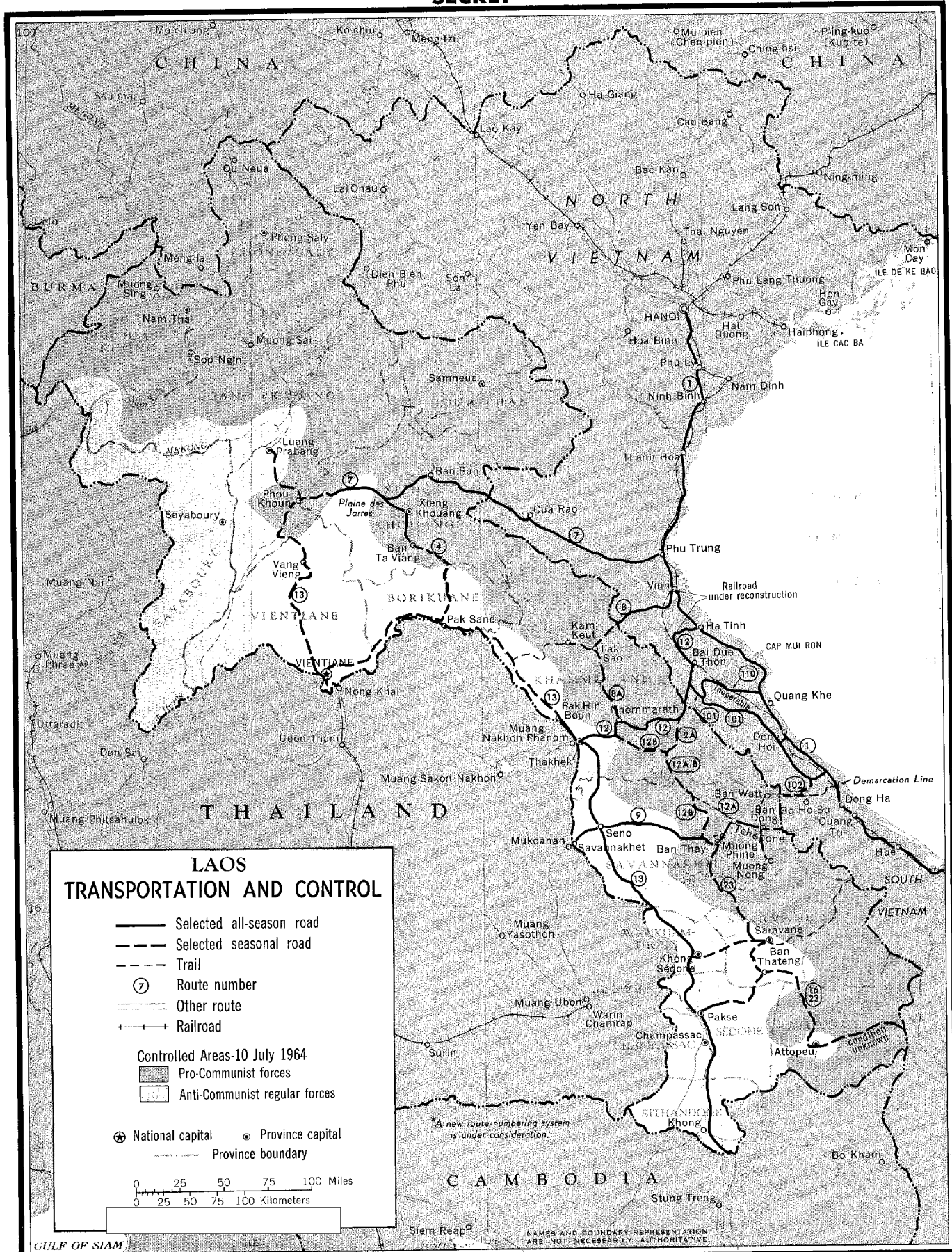
c. The data theoretically provide the average number of trucks that would be seen on each route by each mission if the mission were flown over the entire route. These data are based on the assumption that the traffic pattern on each part of the route photographed is representative of the entire route. Duplication because of more than one mission flown on 1 day has been eliminated. No adjustment has been made for photographed parts of the road obscured by tree coverage, clouds, haze, obliqueness, or poor image quality. No adjustment has been made for the length of a particular route and the frequency of missions theoretically needed to reveal all traffic on a particular route. By assuming that the times in which photography was taken are representative of the entire time period, photographic missions may be considered to be synonymous with days for comparative purposes.

d. Trucks headed in an undetermined direction are included with parked trucks.

S-E-C-R-E-T

Page Denied

Next 1 Page(s) In Document Denied

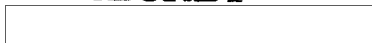
SECRET**SECRET**GROUP 1
EXCLUDED FROM AUTOMATIC DOWNGRADING
AND DECLASSIFICATION

SECRET



25X1

SECRET



25X1